

Detailed Data Tables: Women at Risk

Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Disease, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2015, this resulted in the removal of 4,401 HIV/AIDS cases, of which 1,021 have died and 3,380 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location at diagnosis, is the basis for MDPH service planning. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual risk category for men; those cases have been reassigned to the no identified risk (NIR) category. The presumed heterosexual risk category was used with the intention of identifying HIV risk for women when sex with men is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. The application of the presumed heterosexual risk category to men is overly inclusive in that woman to man HIV transmission is biologically less probable, and there are alternate risks that are possible for men, including sex with other men (MSM) or IDU. The CDC reports men diagnosed with HIV/AIDS who report sex with women as their only risk factor, without corresponding partner risk or HIV status information, in the NIR category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for men in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual risk categories for women.

Table 1. People diagnosed with HIV infection by gender: Massachusetts¹, 2011–2013²

Gender:	N	%
Men	1,553	74%
Women	551	26%
Total	2,104	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/15

Table 2. People living with HIV/AIDS on December 31, 2014 by gender: Massachusetts¹

	HIV/AIDS	
Gender:	N	%
Men	14,098	71%
Women	5,639	29%
Total	19,737	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/15

Table 3. People diagnosed with HIV infection by gender and year of diagnosis: Massachusetts¹ 2004–2013²

	Men		Women		Total
	N	%	N	%	
2004	646	70%	276	30%	922
2005	658	73%	244	27%	902
2006	592	72%	233	28%	825
2007	535	72%	212	28%	747
2008	541	73%	201	27%	742
2009	542	77%	164	23%	706
2010	501	72%	197	28%	698
2011	499	72%	198	28%	697
2012	521	73%	188	27%	709
2013	533	76%	165	24%	698

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Table 4. People diagnosed with HIV infection by gender and reported risk: Massachusetts¹, 2011–2013²

	Men		Women		State Total	
Reported risk:	N	%	N	%	N	%
Male-to-male sex (MSM)	917	59%	N/A	N/A	917	44%
Injection drug use (IDU)	95	6%	59	11%	154	7%
MSM/IDU	56	4%	N/A	N/A	56	3%
Heterosexual sex	72	5%	128	23%	200	10%
Other	6	<1%	4	1%	10	<1%
Total undetermined/other	407	26%	360	65%	767	36%
- Pres. HTSX ³	N/A	N/A	275	50%	275	13%
- Undetermined ⁴	407	26%	85	15%	492	23%
Total	1,553	100%	551	100%	2,104	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

³ Includes woman sex with men of unknown HIV status or risk. This category is limited to women.

⁴ Includes man sex with women of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

Pres. HTSX = Presumed Heterosexual Sex; N/A = Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15

Note: The category of “presumed heterosexual” is used in Massachusetts to re-assign women who are reported with a reported risk of heterosexual sex, but only with a partner of unknown HIV status or behavioral risk. Massachusetts uses the category of presumed heterosexual to distinguish these women from other undetermined cases about which we know less. Prior to January 1, 2011, the presumed heterosexual category was also used to report HIV data in men. The rationale for the application of the presumed heterosexual risk category to women only has been addressed in the MDPH OHA report “Intersecting Risks: HIV Infection among Heterosexual Women and Men in Massachusetts.” (2010)

http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting_risks.pdf. Nationally, the Centers for Disease Control and Prevention categorize “presumed heterosexual” cases as “no identified risk” (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the risk was for women in this category. Although a person may not report other risk behaviors, such as injection drug use to a health care provider, it does not exclude the possibility that an individual has experienced these other risks. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.

Table 5. People living with HIV/AIDS on December 31, 2014 by gender and reported risk: Massachusetts¹

Reported risk:	Men		Women	
	N	%	N	%
Male-to-male sex (MSM)	7,450	53%	N/A	N/A
Injection drug use (IDU)	2,392	17%	1,241	22%
MSM/IDU	677	5%	N/A	N/A
Heterosexual sex	823	6%	1,945	34%
Other	224	2%	182	3%
Total undetermined/other	2,532	18%	2,271	40%
• Presumed heterosexual sex ²	N/A	N/A	1,813	32%
• Undetermined ³	2,532	18%	458	8%
Total	14,098	100%	5,639	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Includes woman sex with men of unknown HIV status or risk. This category is limited to women.

³ Includes man sex with women of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Table 6. Women diagnosed with HIV infection by race/ethnicity¹ and reported risk: Massachusetts², 2011–2013³

Reported risk:	White (NH)		Black (NH)		Hispanic/Latina	
	N	%	N	%	N	%
Injection drug use	37	37%	6	2%	16	11%
Heterosexual sex	18	18%	65	22%	39	28%
Total undetermined/other	43	43%	218	75%	86	61%
• Presumed heterosexual sex ⁴	24	24%	178	61%	64	45%
• Undetermined ⁵	19	19%	40	14%	22	16%
Total⁶	99	100%	292	100%	141	100%

¹ Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Includes woman sex with men of unknown HIV status or risk. This category is limited to women.

⁵ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

⁶ Totals include pediatric and blood/blood products reported risks.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Table 7. Women living with HIV/AIDS on December 31, 2014 by race/ethnicity¹ and reported risk: Massachusetts²

	White (NH)		Black (NH)		Hispanic/ Latina		API	
Reported risk:	N	%	N	%	N	%	N	%
Injection drug use	576	42%	282	11%	370	24%	-- ⁵	-- ⁵
Heterosexual sex	416	30%	840	32%	641	42%	26	33%
Other	48	3%	76	3%	52	3%	-- ⁵	-- ⁵
Total undetermined/other	343	25%	1,387	54%	479	31%	45	57%
• Pres. HTSX ³	242	17%	1,156	45%	375	24%	28	35%
• Undetermined ⁴	101	7%	231	9%	104	7%	17	22%
Total	1,383	100%	2,585	100%	1,542	100%	79	100%

¹ Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Includes woman sex with men of unknown HIV status or risk. This category is limited to women.

⁴ Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up, and those with confirmed occupational risk.

⁵ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic, API = Asian/Pacific Islander, Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Table 8. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts¹, 2011–2013²

Race/Ethnicity:	Men		Women	
	N	%	N	%
White, non-Hispanic	679	44%	99	18%
Black, non-Hispanic	368	24%	292	53%
Hispanic/Latino	432	28%	141	26%
Asian/Pacific Islander	53	3%	12	2%
Other/Unknown	21	1%	7	1%
Total	1,553	100%	551	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/15

Table 9. People living with HIV/AIDS on December 31, 2014 by gender and race/ethnicity: Massachusetts¹

Race/Ethnicity:	Men		Women	
	N	%	N	%
White, non-Hispanic	7,086	50%	1,383	25%
Black, non-Hispanic	3,309	23%	2,585	46%
Hispanic/Latino	3,325	24%	1,542	27%
Asian/Pacific Islander	278	2%	79	1%
Other/Unknown	100	1%	50	1%
Total	14,098	100%	5,639	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Explanation of age adjusted rates

A “rate” of a disease per 100,000 population is a useful way to compare groups that have substantially different population sizes rather than relying on the raw number of cases. For example, the number of people living with HIV/AIDS on December 31, 2014 who are Hispanic/Latino, is 4,867 whereas the number of people living with HIV/AIDS who are white (non-Hispanic) is 8,469. Although the *number* of people living with HIV/AIDS who are Hispanic/Latino in Massachusetts is smaller than the number of people living with HIV/AIDS who are white (non-Hispanic), we also need to consider that there are far fewer people of Hispanic/Latino heritage living in Massachusetts than white (non-Hispanic) individuals. Hispanic/Latino individuals represent 10% of the Massachusetts population compared to white (non-Hispanic) individuals who represent 78% of the population¹. If HIV/AIDS had the same impact on the Hispanic/Latino population of the state as on the white (non-Hispanic), then there should be eight times as many cases in white (non-Hispanic) individuals, but there are less than twice as many. By calculating a rate which takes into consideration the differences in the population size, it is evident that the number of people living with HIV/AIDS for every 100,000 Hispanic/Latino individuals in Massachusetts is much higher than the rate for every 100,000 white (non-Hispanic) individuals. This is called a “crude rate” and is calculated by dividing the number of people living with HIV/AIDS by the population of interest (the total number of Hispanic/Latino individuals in Massachusetts, for example) and multiplying by 100,000. (See example 1.A below).

¹ The denominators for prevalence calculations are based on year 2010 population estimates from the MDPH Bureau of Health Information, Statistics, Research and Evaluation

Example 1.A: Calculation of crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (165.0 per 100,000)

$$\begin{aligned}
 \text{Crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals} &= (\text{number of white (non-Hispanic) individuals living with HIV/AIDS} \div \text{population size of white (non-Hispanic) individuals}) \times 100,000 \\
 &= (8,469 / 5,132,633) \times 100,000 \\
 &= (.00016500) \times 100,000 \\
 &= \mathbf{165.0}
 \end{aligned}$$

However, sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black (non-Hispanic) and Hispanic/Latino populations are generally younger than white (non-Hispanic). The median age of black (non-Hispanic) people (29.7 years) and Hispanic/Latino people (24.5 years) is younger than that of white (non-Hispanic) people (38.8 years). Therefore, it is necessary to “age-adjust” the HIV/AIDS prevalence rate to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 1.B below).

Example 1.B: Calculation of age-adjusted HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (139.0 per 100,000)

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
<i>Age group (in years)</i>	<i># of prevalent HIV/AIDS cases</i>	<i>Population (2010)</i>	<i>2000 US standard population weight</i>	<i>Age-adjusted rate ((B÷C×D)×100,000))</i>
<1	0	48,010	0.013818	0.00
1-4	0	200,452	0.055317	0.00
5-14	4	571,967	0.145565	0.10
15-24	86	677,899	0.138646	1.76
25-34	522	603,245	0.135573	11.73
35-44	1,067	676,064	0.162613	25.66
45-54	3,309	841,315	0.134834	53.03
55-64	2,635	697,852	0.087247	32.94
65-74	720	403,518	0.066037	11.78
75-84	117	275,380	0.044842	1.91
85+ years	9	136,931	0.015508	0.10
Total	8,469	5,132,633	1.000000	139.0

To see the effect of age-distribution on prevalence rates see Tables 10 and 11 below for a comparison of crude and age-adjusted rates by race/ethnicity.

Table 10. Crude and age-adjusted rates of diagnosis of HIV infection per 100,000 population¹ by race/ethnicity and gender: Average annual rate 2011–2013², Massachusetts³

State total:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic)	5.1	5.1
Black (non-Hispanic)	53.0	52.6
Hispanic/Latino	30.4	31.8
Asian/Pacific Islander	6.0	5.2
Total rate	10.7	10.7
Men:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic) Men	9.1	9.0
Black (non-Hispanic) Men	61.1	61.6
Hispanic/Latino Men	46.7	48.7
Asian/Pacific Islander Men	10.3	8.8
Total rate among men	16.3	16.2
Women:	Crude rate per 100,000	Age-adjusted rate per 100,000
White (non-Hispanic) Women	1.2	1.3
Black (non-Hispanic) Women	45.3	44.6
Hispanic/Latina Women	14.7	16.0
Asian/Pacific Islander Women	2.1	1.9
Total rate among women	5.4	5.5
¹ The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. ³ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/15		

Table 11. Crude and age-adjusted HIV/AIDS prevalence per 100,000 population¹ on December 31, 2014 by race/ethnicity and gender: Massachusetts²

	Crude rate per 100,000	Age-adjusted rate per 100,000
State Total:		
White, non-Hispanic	165.0	139.0
Black, non-Hispanic	1,418.9	1,460.0
Hispanic/Latino	775.4	1,011.2
Asian/Pacific Islander	99.3	101.7
Total prevalence	301.5	272.4
Men:	Crude rate per 100,000	Age-adjusted rate per 100,000
White, non-Hispanic	285.8	239.2
Black, non-Hispanic	1,649.3	1,753.3
Hispanic/Latino	1,079.2	1,487.3
Asian/Pacific Islander	161.6	166.0
Total prevalence among men	445.3	399.9
Women:	Crude rate per 100,000	Age-adjusted rate per 100,000
White, non-Hispanic	52.1	45.4
Black, non-Hispanic	1,203.7	1,217.1
Hispanic/Latina	482.5	604.3
Asian/Pacific Islander	42.1	43.5
Total prevalence among women	166.8	154.3
¹ The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation ² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/15		

Table 12. People diagnosed with HIV infection within the years 2011–2013¹ by gender and place of birth: Massachusetts²

Race/Ethnicity:	Men		Women	
	N	%	N	%
United States (US)	1,001	64%	240	44%
Puerto Rico/US Dependency ³	110	7%	39	7%
Non-US	442	28%	272	49%
Total	14,098	100%	5,639	100%

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/14

Table 13. People living with HIV/AIDS on December 31, 2014 by gender and place of birth: Massachusetts¹

Place of Birth:	Men		Women	
	N	%	N	%
United States (US)	9,866	70%	2,942	52%
Puerto Rico/US Dependency ²	1,316	9%	676	12%
Non-US	2,916	21%	2,021	36%
Total	14,098	100%	5,639	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Ninety-eight percent of people living with HIV/AIDS in MA who were born in a US dependency were born in Puerto Rico, 2% were born in US minor outlying areas, <1% were born in the US Virgin Islands, and <1% were born in Guam.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Table 14. Women diagnosed with HIV infection by race/ethnicity¹ and place of birth: Massachusetts², 2011–2013³

Race/Ethnicity:	US		Puerto Rico/ US Dependency ⁴		Non-US	
	N	%	N	%	N	%
White (NH)	92	93%	-- ⁶	1%	6	6%
Black (NH)	91	31%	-- ⁶	1%	200	68%
Hispanic/Latino	49	35%	37	26%	55	39%
All Women⁵	240	44%	39	7%	272	49%

¹ Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

⁴ Ninety-nine percent of people diagnosed with HIV infection from 2011–2013 who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands.

⁵ Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

⁶ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Table 15. Women diagnosed with HIV infection by place of birth and year of diagnosis: Massachusetts¹ 2004–2013²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	
2004	111	40%	37	13%	128	46%	276
2005	110	45%	24	10%	110	45%	244
2006	114	49%	19	8%	100	43%	233
2007	101	48%	19	9%	92	43%	212
2008	79	39%	26	13%	96	48%	201
2009	72	44%	17	10%	75	46%	164
2010	78	40%	10	5%	109	55%	197
2011	94	47%	10	5%	94	47%	198
2012	74	39%	17	9%	97	52%	188
2013	72	44%	12	7%	81	49%	165

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

³ Ninety-eight percent of people living with HIV/AIDS in MA who were born in a US dependency were born in Puerto Rico, 2% were born in US minor outlying areas, <1% were born in the US Virgin Islands, and <1% were born in Guam.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Table 16. People diagnosed with HIV infection by gender and age at HIV diagnosis: Massachusetts¹, 2011–2013²

Age (years):	Men		Women	
	N	%	N	%
Under 13	3	<1%	4	1%
13 to 19	36	2%	27	5%
20 to 24	184	12%	37	7%
25 to 29	216	14%	54	10%
30 to 34	194	12%	87	16%
35 to 39	163	10%	66	12%
40 to 44	213	14%	67	12%
45 to 49	230	15%	78	14%
50 to 54	148	10%	53	10%
55 to 59	95	6%	34	6%
60+	71	5%	44	8%
Total	1,553	100%	551	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/15

Table 17. Women diagnosed with HIV infection by race/ethnicity and age at HIV diagnosis: Massachusetts¹, 2011–2013²

	White NH		Black NH		Hispanic/Latina	
Age (years):	N	%	N	%	N	%
Under 13	1	1%	3	1%	0	0%
13 to 19	3	3%	12	4%	10	7%
20 to 24	11	11%	20	7%	6	4%
25 to 29	8	8%	26	9%	18	13%
30 to 34	17	17%	49	17%	19	13%
35 to 39	13	13%	32	11%	17	12%
40 to 44	11	11%	33	11%	20	14%
45 to 49	15	15%	47	16%	14	10%
50 to 54	10	10%	26	9%	16	11%
55 to 59	5	5%	17	6%	9	6%
60+	4	4%	27	9%	12	9%
Total	98	100%	292	100%	141	100%

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/15

Table 18. People diagnosed with HIV infection by Health Service Region (HSR)¹ and gender: Massachusetts², 2011–2013³

Health Service Region:	Men		Women		Total
	N	%	N	%	N
Boston HSR	503	79%	130	21%	633
Central HSR	111	67%	54	33%	165
Metro West HSR	236	73%	87	27%	323
Northeast HSR	266	68%	126	32%	392
Southeast HSR	229	74%	80	26%	309
Western HSR	173	72%	68	28%	241
Prisons ⁴	30	86%	5	14%	35
Mass. Total	1,553	74%	551	26%	2,104

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf, for configuration of health service regions.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999

⁴ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/15

Table 19. People living with HIV/AIDS on December 31, 2014 by Health Service Region (HSR)¹ and gender: Massachusetts²

Health Service Region	Men		Women		Total
	N	%	N	%	N
Boston HSR	4,773	77%	1,463	23%	6,236
Central HSR	1,036	63%	618	37%	1,654
Metro West HSR	2,092	72%	819	28%	2,911
Northeast HSR	2,100	67%	1,047	33%	3,147
Southeast HSR	1,928	71%	795	29%	2,723
Western HSR	1,368	64%	775	36%	2,143
Prison ³	790	87%	118	13%	908
Massachusetts Total⁴	14,098	71%	5,639	29%	19,737

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf for configuration of health service regions.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

⁴ Mass. total includes 15 persons living with HIV/AIDS with unknown residence at time of report.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding) , data as of 1/1/15

Table 20. Ten cities/towns¹ in Massachusetts² with the highest proportion of women among HIV infection diagnoses (HIV Dx): 2011–2013³

Rank	City/Town	Number of HIV Dx among women	Percent of Total HIV Dx
1	Brockton	39	46.4%
2	Malden	15	45.5%
3	Lowell	29	42.6%
4	Waltham	12	40.0%
5	Framingham	9	39.1%
6	Lawrence	24	38.1%
7	Lynn	19	37.3%
8	Worcester	29	36.3%
9	Springfield	40	32.0%
10	New Bedford	14	31.1%

¹ Among cities/towns with over 20 reported HIV infection diagnoses in the years 2010–2012. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included.

² Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/15

Technical Notes:

Tables 21 includes data reported by Massachusetts residents through anonymous telephone interviews from 2012 to 2013. This ongoing random-digit-dial telephone survey, the Behavioral Risk Factor Surveillance System (BRFSS), covers a broad range of topic areas (including risk related to sexual activity) and is part of a CDC-funded national survey program.

Table 21. Number of sexual partners in the past year¹, women BRFSS respondents ages 18–64 Massachusetts, 2012–2013				
	0 Partners	1 Partner	2+ Partners	N²
Total Women	23.7%	71.9%	4.3%	3,323
Age in Years:	0 Partners	1 Partner	2+ Partners	N
18–24	28.7%	50.1%	21.2%	97
25–34	10.2%	85.3%	4.5%	308
35–44	13.0%	85.3%	1.7%	669
45–64	32.7%	66.6%	0.7%	2,201
Race/Ethnicity:	0 Partners	1 Partner	2+ Partners	N
White (non-Hispanic)	22.6%	72.3%	5.0%	2,596
Black (non-Hispanic)	33.2%	63.4%	3.5%	241
Hispanic/Latino	28.0%	69.4%	-- ³	300
Sex of Partner⁴:	0 Partners	1 Partner	2+ Partners	N
Same sex	Not Applicable	-- ³	-- ³	55
Opposite sex	Not Applicable	94.9%	5.1%	2,231
¹ "Number of sexual partners in past year" is a state-added question administered to a sub-sample of BRFSS respondents and represents the number of people a respondent reports having sex with. Sex was defined by the interviewer as including oral, vaginal, or anal sex. ² Only respondents with known values are included in this table. Column sub-totals may not equal overall total due to missing values. ³ Unstable estimates with N < 50 or relative standard error >30% are suppressed ⁴ Only asked of adults reporting sex (including oral, vaginal, or anal sex) in the past year Data source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2012–2013				

Technical Notes:

Tables 22–24 include data reported by students in randomly selected Massachusetts public high schools every odd year from 1993 to 2013. This anonymous survey, the Youth Risk Behavior Survey (YRBS), is administered by the Massachusetts Department of Elementary and Secondary Education in collaboration with the Centers for Disease Control and Prevention and focuses on risk behaviors that may affect the health and/or safety of high school students.

Table 22. Sexual behavior as reported among female respondents to the Youth Risk Behavior Survey: Massachusetts, 2013

By Behavior:	Percent of total responding yes to specified question	N ¹ (total number of respondents for each question)
Ever had sexual intercourse	36.5%	1259
Sexual intercourse before age 13	1.9%	1257
4 or more lifetime sexual intercourse partners	8.2%	1254
Sexual intercourse in last 3 months	29.0%	1255
Condom used at last intercourse ²	50.8%	341
Alcohol/drugs used at last intercourse ²	18.2%	349
Ever been, gotten someone pregnant	3.1%	1307
Ever had sexual contact against their will	13.3%	1317
¹ The number of respondents for each question varies because some survey participants do not provide an answer		
² Among women reporting sexual intercourse in the past three months		
Data Source: Massachusetts Department of Elementary and Secondary Education		

Table 23. Massachusetts Youth Risk Behavior Survey respondents reporting condom use at last sexual intercourse by year and gender: Massachusetts, 1993–2013¹

Year	Men		Women		Total	
	%	Total N ²	%	Total N ²	%	Total N ²
1993	57.4%	409	46.7%	462	51.8%	872
1995	59.9%	623	52.0%	626	55.9%	1,253
1997	64.2%	517	50.4%	559	57.0%	1,079
1999	62.6%	589	52.0%	639	57.2%	1,237
2001	61.6%	553	54.9%	582	58.1%	1,139
2003	60.3%	424	57.4%	496	57.4%	922
2005	71.6%	442	59.2%	542	65.0%	986
2007	63.2%	422	59.2%	505	61.1%	929
2009	65.7%	409	50.6%	437	57.5%	849
2011	64.5%	373	51.0%	387	57.7%	761
2013	65.2%	323	50.8%	341	57.6%	667

¹ A random sample of high schools is selected for participation each year; data presented do not represent cohorts followed over time

² Total N = total number of respondents by sex (unweighted). The number of respondents for each question varies from year to year

Data Source: Massachusetts Department of Elementary and Secondary Education

Table 24. Massachusetts Youth Risk Behavior Survey respondents reporting sexual intercourse (ever) by year and gender: Massachusetts, 1993–2013¹

Year	Men		Women		Total	
	%	Total N ²	%	Total N ²	%	Total N ²
1993	51.4%	1,326	46.0%	1,435	48.7%	2,763
1995	50.3%	1,870	42.8%	1,930	46.5%	3,806
1997	46.8%	1,800	42.4%	1,858	44.7%	3,664
1999	46.4%	1,922	41.8%	2,017	44.1%	3,954
2001	46.3%	1,886	42.3%	1,892	44.3%	3,786
2003	40.8%	1,581	41.1%	1,676	41.0%	3,261
2005	47.9%	1,512	42.9%	1,669	45.4%	3,185
2007	45.2%	1,344	43.7%	1,495	44.4%	2,844
2009	48.0%	1,225	44.6%	1,251	46.4%	2,480
2011	44.7%	1,228	39.4%	1,281	42.0%	2,513
2013	39.4%	1,251	36.5%	1,259	38.1%	2,516

¹ A random sample of high schools is selected for participation each year; data presented do not represent cohorts followed over time

² Total N = total number of respondents by sex (unweighted). The number of respondents for each question varies from year to year

Data Source: Massachusetts Department of Elementary and Secondary Education

Table 25. Total reported AIDS cases by gender and year of diagnosis: Massachusetts¹, selected years, 1985–2013

Year of diagnosis:	Men		Women		Total
	N	%	N	%	
1985	203	90%	23	10%	226
1990	857	82%	189	18%	1,046
1995	1,009	76%	326	24%	1,335
2000	544	70%	231	30%	775
2004	484	69%	219	31%	703
2005	500	72%	198	28%	698
2006	472	71%	196	29%	668
2007	385	68%	183	32%	568
2008	343	72%	131	28%	474
2009	325	69%	143	31%	468
2010	296	69%	130	31%	426
2011	295	69%	134	31%	429
2012	270	68%	126	32%	396
2013	223	71%	93	29%	316

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); Data as of 1/1/15

Table 26. Deaths among persons reported with HIV/AIDS by gender and year of death: Massachusetts¹, 2004–2013

Year of death	Men		Women		Total
	N	%	N	%	N
2004	258	73%	96	27%	354
2005	233	70%	99	30%	332
2006	232	72%	92	28%	324
2007	201	70%	85	30%	286
2008	207	73%	76	27%	283
2009	196	68%	92	32%	288
2010	187	71%	77	29%	264
2011	166	72%	64	28%	230
2012	159	67%	77	33%	236
2013	139	74%	49	26%	188

¹ Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/15